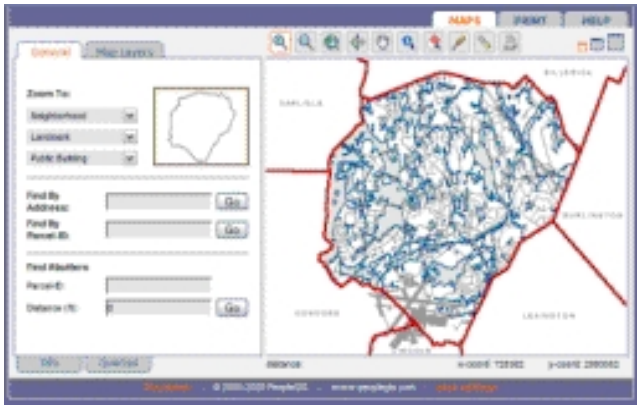
Town of Bedford GIS Maps ~ Wetland Map Guidelines





The Town of Bedford GIS wetland maps were developed from aerial photos of the April 2003 Town flyover. The Town's consultant, Sanborn, imported data on planimetrics and topography from the 1999 aerial photos by Chas. H. Sells, scanned in the wetland boundaries from the 1982 maps and added many surveyed wetland delineations. Sanborn then used photo-interpretation methods to identify new wetland areas and propose revisions to the 1982 wetland boundaries. The planimetrics showed where development had taken place within wetlands since 1976; in such cases Sanborn added a revised wetland line outside the developed areas, as well as the 1982 line running through the development. The contract with Sanborn included some field analysis by local wetland consultants, but this effort did not cover more than a few wetlands. All wetland boundaries - the 1982, new wetland areas, revised lines and surveyed lines - were retained on the draft images.

The various wetland lines were analyzed with respect to specific locations and knowledge of existing conditions, along with information in the Conservation Commission project files and field review of some areas. As this review progressed, new revised wetland lines were added in some areas, and in all cases one wetland line was chosen as being most accurate. The current GIS wetlands maps will not indicate whether a wetland boundary has been changed from the 1982 maps, with the exception of surveyed boundaries, which have a more angular pattern.

It has not been possible to research every property that has come before the Conservation Commission for wetland location and project review, or to arrange site visits to every property that contains wetland areas. In addition, the adjustments that have been made are approximate; most do not include any measurements from fixed locations.

Approved wetland delineations are valid for three (3) years from the date of acceptance by the Bedford Conservation Commission. In addition, new projects come before the Commission on a continual basis; as such, the Town's wetlands maps are always under review and subject to change when more accurate or additional information is received, either through visits to private property, detailed file review, or simply revisions to the maps as projects come before the Commission.

Characteristics of the current GIS map wetlands data layer

* The majority of the wetland boundaries on the maps are those shown on the 1982 maps or surveyed wetland boundaries of larger land areas.
* Revisions derived from photo-interpretation, file review or site visits blend into the boundaries retained from the 1982 maps and cannot be distinguished from them.

Appearance of the GIS map wetlands data layer

* The boundary of vegetated wetlands is shown as a continuous dark blue ticked line.
* Surveyed wetland boundaries have the same line, but are more angular, due to actual wetland flag locations.
* The wetland within the boundary is shown as light green.
* "Wet areas" are shown as a light blue wetland symbol overlay with a light blue broken line boundary; these areas are generally shrub swamps or marshes that are much wetter than forested wetlands, the common wetland type.
* Lakes, ponds and smaller "open water" areas are shown as medium blue with a black hatched pattern.
* The Concord River, Shawsheen River and Elm Brook are shown as light blue with a black hatched pattern.
* Perennial streams are shown as medium blue lines of varying thickness.
* Intermittent, or non-perennial streams, are shown as single interrupted medium blue lines. In

cases where two banks have been identified, the stream is shown as a double interrupted medium blue line filled with light blue shading.
* Pink areas indicate potential additional wetland areas as identified by the Massachusetts Department of Environmental Protection (DEP), and are subject to local field verification.

Use and Interpretation of the GIS map wetlands data layer

* Conservation Administrator review will be required for building permit applications if the proposed project is within 200 feet of a wetland resource area (bank, land under waterway or water body, bordering or isolated vegetated wetland, land subject to flooding) or within 300 feet of a perennial stream.
* The GIS wetlands maps do not have jurisdictional status; that is, they do not represent a legal document of wetlands or wetland boundary locations.
* All wetland delineations, boundaries or lines are subject to the review of the Conservation Commission; the Commission determines the legal status of a wetland delineation with respect to State and local wetlands laws.
* Surveyed wetland delineations that have been approved by the Commission have a three-year jurisdictional status, after which the Commission can require a new delineation.
* All wetland boundaries shown on the GIS maps are "approximate and subject to field review or delineation"; surveyed boundaries are jurisdictionally correct only in terms of the signed and stamped survey plan submitted to and approved by the Commission. If a new project is proposed on a site with a surveyed delineation, the applicant should develop a project plan based on the survey plan rather than on a copy of the wetlands map. Attempts to scale the 100-foot buffer zone, 200-foot Riverfront Area and other buffer zone lines on the GIS maps must all be considered approximations.
* The conservation files, both current and archived, should be researched for additional information regarding wetlands; this should always be the case when a new filing for a particular address has been received by the Commission.
* The 1982 wetland maps may provide more detailed information than the GIS maps on interior wetland streams and ditches.
* Elevations shown on the Town of Bedford GIS Wetland Maps may be used to approximate the location of the 10- and 100-year floodplain elevations as given in the FEMA Flood Study cross-sections, with the following adjustment:

*Elevations on the Town GIS wetland maps are 0.8 foot lower than FEMA elevations due to different datums.*

*In order to indicate the approximate location of the 10- and 100-year floodplains on the Town of*

*Bedford Wetland Maps, take the FEMA cross-section elevation and subtract 0.8 foot. (8/10ths of a foot, not 8 inches)*

*Example: The FEMA cross-section for the 100-year floodplain to the Concord River is 119.5 feet in elevation. When applying the flood plain boundary to the wetland map, use 119.5 - 0.8 or 118.7.*